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EXAMINER	
YIMAM, HARUN M	

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JIN LU and KAVITHA V. DEVARA

Appeal 2007-2471
Application 09/829,786
Technology Center 2600

Decided: March 25, 2008

Before KENNETH W. HAIRSTON, ANITA PELLMAN GROSS, and MAHSHID D. SAADAT, *Administrative Patent Judges*.

GROSS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Lu and Devara (Appellants) appeal under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1 through 21, which are all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

Appellants' invention relates to a system and method for inserting new data packets into an incoming digital video transport stream of original data packets. The method involves estimating from the most recently received

original data packets the data frequency of the next original data packets and using that estimation to determine the insertion rate of the new data packets. Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. For use in a broadcast facility, an apparatus for inserting new data packets into an incoming digital video transport stream containing a plurality of original data packets, said apparatus comprising:

an input buffer capable of storing said original data packets of said incoming digital video transport stream; and

a video processor capable of retrieving said stored original data packets from said input buffer and determining from said original data packets N data frequencies associated with N most recently received ones of said plurality of original data packets, wherein said video processor estimates from said N data frequencies an estimated data frequency of a plurality of next incoming original data packets and uses said estimated data frequency to determine an insertion rate at which said new data packets may be inserted into said plurality of next incoming original data packets.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Pinder	US 6,219,358 B1	Apr. 17, 2001
Bertram	US 2002/0064177 A1	May 30, 2002
Shimomura	US 6,473,858 B1	Oct. 29, 2002
Firoiu	US 6,820,128 B1	Nov. 16, 2004

Claims 1 through 6 and 8 through 13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bertram in view of Pinder.

Claims 7 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bertram in view of Pinder and Firoiu.

Claims 15 through 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bertram in view of Pinder and Shimomura.

Claim 21 stands rejected under 35 U.S.C. § 103 as being unpatentable over Bertram in view of Pinder, Shimomura, and Firoiu.

We refer to the Examiner's Answer (mailed June 16, 2006) and to Appellants' Brief (filed April 3, 2006) for the respective arguments.

SUMMARY OF DECISION

As a consequence of our review, we will reverse the obviousness rejections of claims 1 through 21.

OPINION

Independent claims 1 and 8 each recite, in pertinent part, determining N data frequencies associated with N most recently received original data packets, estimating from the N data frequencies a data frequency of the next incoming original data packets, and using the estimated data frequency to determine an insertion rate at which the new data packets may be inserted into the next incoming original data packets. The Examiner admits (Ans. 4) that Bertram fails to disclose the above-noted limitations. The Examiner (Ans. 4-5) turns to Pinder for such a teaching, asserting that it would have been obvious to modify Bertram in view of Pinder "for the benefit of determining the available capacity for insertion of data."

Appellants contend (Br. 6) that Pinder fails to teach or suggest the determining, estimating, and using steps noted above, and, therefore, that the combination of Bertram and Pinder fails to teach all of the claimed limitations. Accordingly, the issue before us is whether Pinder discloses the claimed determining frequencies of most recently received original data packets, estimating frequencies of the next incoming original data packets,

and using the estimated frequencies to determine an insertion rate for new data packets to be inserted into the next incoming original data packets.

Pinder discloses (col. 9, ll. 12-18, 44-48, and 63-67, and col. 10, ll. 46-49) packet handler 500 extracts information from an incoming bit stream and determines the available capacity for insertion of data into that bit stream. The packet handler then inserts data into that bit stream to form an outgoing bit stream. At no point does Pinder disclose using insertion capacity information from one incoming bit stream to estimate the insertion capacity, or frequency, of another incoming bit stream. All extractions, determinations, and insertions are performed on the same bit stream. Therefore, although Pinder may determine the frequency of the most recently received original data packets, Pinder fails to disclose estimating frequencies of the next incoming original data packets and using the estimation to determine the insertion rate for new data packets to be inserted into the next incoming original data packets. Consequently, the combination of Bertram and Pinder fails to teach or suggest all of the claimed limitations, and we cannot sustain the obviousness rejection of claims 1 through 6 and 8 through 13.

The Examiner adds Firoiu to the combination of Bertram and Pinder to reject claims 7 and 14, which depend from and include all of the limitations of claims 1 and 8, respectively. Firoiu deals with packet drop rates as a function of the average number of packets in the buffer. *See*, for example, the abstract. Firoiu does not disclose estimating the frequency of the next set of original data packets from the known frequency of the most recently received data packets. Therefore, Firoiu fails to cure the deficiency

of the primary combination discussed *supra*. Accordingly, we cannot sustain the obviousness rejection of claims 7 and 14.

Claims 15 through 21 include the same limitations of determining frequencies of most recently received original data packets, estimating frequencies of the next incoming original data packets, and using the estimated frequencies to determine an insertion rate for new data packets to be inserted into the next incoming original data packets. To reject claims 15 through 20, the Examiner adds Shimomura to the combination of Bertram and Pinder. The Examiner adds Shimomura to the combination of Bertram, Pinder, and Firoiu to reject claim 21. Since Shimomura provides no disclosure regarding the insertion of data packets, Shimomura fails to cure the deficiencies noted *supra*. Consequently, we cannot sustain the obviousness rejections of claims 15 through 21.

ORDER

The decision of the Examiner rejecting claims 1 through 21 under 35 U.S.C. § 103 is reversed.

REVERSED

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